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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DANG, THANH HA T

ART UNIT	PAPER NUMBER
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2163

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/723,730

Applicant(s)

LARCHEVEQUE ET AL.

Examiner

Thanh-Ha Dang

Art Unit

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/25/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/25/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/25/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-34 are rejected in this Office Action.

Information Disclosure Statement

2. The references listed in the Information Disclosure Statement filed on:
11/25/2003; 01/5/2004; 4/12/2004; 5/27/2004; 10/27/2004; 1/7/2005; 4/11/2005;
01/10/2006; 3/20/2006; 5/26/2006; and 8/7/2006 have been considered.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 31 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 31 recites an apparatus comprising "means for locating ...; means for validating ...; and means for displaying ... invalid" that describes software component supporting each of the respective means plus function elements. Therefore, the apparatus as a whole is at best directed only to an arrangement of software. The apparatus as such represents non-statutory subject matter.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 6 and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 1, 6 and 31 recite "... using a second XPath expression" that there is no description from the Specification on how or where the second XPath is defined or obtained to validate the node.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 recites "... wherein the locate the node includes ..." that is indefinite.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 7,107,282 issued to Aravind Yalamanchi ("Yalamanchi") and further in view of US Patent No. 7,036,072 issued to Sulistio et al. ("Sulistio").

As to **Claims 1, 6 and 31**, *Yalamanchi* teaches one or more computer-readable media comprising computer-executable instructions that perform the following when executed by a computer:

- locate a node of an extensible markup language (XML) data file using a first XPath expression (*column 6, lines 57-59 locate a node using a first Xpath expression*); and
- *Yalamanchi does not explicitly teach* validate or invalidate the node using a second XPath expression; and display an error message if the node is invalid.

However,

Sulistio teaches validate or invalidate the node using a second XPath expression (*Figure 20, column 38, lines 22-32*); and display an error message if the node is invalid (*column 38, lines 28-29*).

It would have been obvious to one of the ordinary skill in the art during the time the invention was made to use the error handling teaching of Sulistio with managing xpath expressions in a database system teaching of Yalamanchi to provide method and system wherein error detected is displayed to facilitate error correction in computer software.

As to **Claims 2 and 32**, *Yalamanchi in combination with Sulistio teaches* further comprising:

- reading a first attribute and a second attribute from an XML element (*Yalamanchi, column 2, lines 62-64*); and
- parsing the first xpath expression from the first attribute and the second xpath expression from the second attribute (*Yalamanchi, column 3, lines 3-12*).

As to **Claims 3 and 33**, *Yalamanchi in combination with Sulistio teaches* wherein the locate the node includes comparing each node of the XML data file against a match pattern within the first XPath expression (*Sulistio, Figure 18, column 37, lines 11-33*).

As to **Claims 4 and 34**, *Yalamanchi in combination with Sulistio teaches* wherein the validation or invalidation of the node includes evaluating data within the node against the second XPath expression (*Sulistio, Figures 12-13, column 33, lines 62-64*).

As to **Claim 5**, *Yalamanchi in combination with Sulistio teaches* wherein the validation or invalidation of the node includes evaluating data within the node against a Boolean operator within the second XPath expression (*Yalamanchi, column 7, line 5*).

As to **Claim 7**, *Yalamanchi in combination with Sulistio teaches* wherein the first XPath expression and the second XPath expression are within an XML element (*Yalamanchi, column 6, lines 57-59*).

As to **Claim 8**, *Yalamanchi in combination with Sulistio teaches* wherein the second XPath expression specifies a Boolean operator (*Yalamanchi, column 7, line 5*).

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pub. No. US2004/0010752 issued to Chan et al. ("Chan") and further in view of US Patent No. 7,036,072 issued to Sulistio et al. ("Sulistio").

As to **Claim 9**, *Chan teaches* one or more computer-readable media comprising computer-executable instructions that perform the following when executed by a computer:

- read an extensible markup language (XML) element containing a first attribute, a second attribute, and a third attribute, wherein the first attribute indicates a match pattern (*page 1 [0008]*);
- parse the first attribute into a first XPath expression (*page 2 [0013]*);
- find nodes in an XML data file that match the match pattern by evaluating the nodes of the XML data file against the first XPath expression (*page 3 [0033]*);
- parse the second attribute into a second XPath expression, wherein the second attribute specifies an expression context relative to each of the matching nodes (*Figure 4, page 3 [0038]*);
- obtain a set of nodes from the matching nodes that define the expression context for each of the matching nodes by evaluating the matching nodes against the second XPath expression (*page 3 [0033]*);
- parse the third attribute into a third XPath expression, wherein the third attribute specifies a Boolean expression condition (*page 5 [0055], wherein lines 2-6 illustrate the boolean expression condition*); and
- *Chan does not explicitly teach* determine if each node of the set of nodes violates the third XPath expression by evaluating each node of the set of nodes against the third XPath expression. However,

Sulistio teaches determine if each node of the set of nodes violates the third XPath expression by evaluating each node of the set of nodes against the third XPath expression (*Figure 12, column 37, lines 26-34*).

It would have been obvious to one of the ordinary skill in the art during the time the invention was made to use the error handling teaching of Sulistio with system and method for filtering xml documents with xpath expression teaching of Chan to provide method and system wherein error detected is displayed to facilitate error correction in computer programs.

As to **Claim 10**, *Chan in combination with Sulistio teaches* further comprising: associate each node of the set of nodes that violates the third XPath expression with an error message (*Sulistio, column 38, lines 28-29*).

As to **Claim 11**, *Chan in combination with Sulistio teaches* further comprising:

- associate each node of the set of nodes that violates the third XPath expression with an error message (*Sulistio, column 38, lines 28-29*); and
- display the error message for each node associated with the error message (*Sulistio, column 38, lines 28-29*).

Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pub. No. US2004/0010752 issued to Chan et al. ("Chan") and further in view of US Patent No. 7,036,072 issued to Sulistio et al. ("Sulistio").

As to **Claim 12**, *Chan teaches one or more computer-readable media comprising:*

- an extensible markup language (XML) element, the XML element having a match attribute and an expression attribute (*Figure 3, label 310, page 6 [0075]*), and wherein:
- the match attribute identifies nodes of an XML data file (*page 1 [0008]*); and
- *Chan does not explicitly teach the expression attribute contains an XPath expression capable of being evaluated as true or false against data within each of the identified nodes. However,*

Sulistio teaches the expression attribute contains an XPath expression capable of being evaluated as true or false against data within each of the identified nodes (column 10, lines 21-67 wherein `xsl:if test = "string($xm:hasSchematron) = 'true'"` illustrates the xpath expression capable of being evaluated as true against data within the identified node).

It would have been obvious to one of the ordinary skill in the art during the time the invention was made to use the validation of structured document teaching of Sulistio with system and method for filtering xml documents with xpath expression teaching of Chan to provide method and system which enhance the current validation system and method.

As to **Claim 13**, *Chan in combination with Sulistio teaches wherein the match attribute includes a second XPath expression identifying the nodes of the*

XML data file (*Chan, Figure 3, label 310/320/330/340 illustrates a second xpath expression identifying the nodes*).

As to **Claim 14**, *Chan* in combination with *Sulistio* teaches wherein the XML element further comprises:

- an expression-context attribute that specifies parent nodes that are roots of the identified nodes (*Chan, page 3 [0031]*), and
- a show-error-location attribute that specifies, based on the parent nodes of the identified nodes, where on a representation of the XML data file an error message can be displayed (*Sulistio, column 38, lines 28-29*).

Claims 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pub. No. US2003/0014397 issued to Chau et al. ("Chau") and further in view of US Patent No. 7,036,072 issued to Sulistio et al. ("Sulistio").

As to **Claim 15**, *Chau* teaches one or more computer-readable media comprising computer-executable instructions that perform the following when executed by a computer:

- determine that a node of an extensible markup language (XML) data file is associated with an XML element (*page 9 [0167] and page 23 [0615 and 0617]*);
- read, from the XML element, an error message attribute, the error message attribute including an error message (*page 35 [0830]*); and

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- *Chau does not explicitly teach* associate the error message with the node.

However,

Sulistio teaches associate the error message with the node (*column 38, lines 28-29*).

It would have been obvious to one of the ordinary skill in the art during the time the invention was made to use the error handling teaching of Sulistio with generating documents from a relational database using xpath model teaching of Chau to provide method and system wherein error detected is displayed to facilitate error correction in computer programs.

As to **Claim 16**, *Chau in combination with Sulistio teaches* further comprising: display the error message on a display in which the node of the XML data file is represented (*Sulistio, column 38, lines 28-29*).

As to **Claim 17**, *Chau in combination with Sulistio teaches* further comprising:

- read, from the XML element, a mode attribute, the mode attribute setting forth a modal or modeless type of error present in the node (*Chau, page 19 [0525] wherein 'for each row mode db2sql' illustrates the mode attribute setting forth a modal*); and
- if the type of error present in the node is the modal type, rolling back data in the node (*Chau, page 33 [0814] wherein 'the condition predicate in the*

RDB_node will be pushed down' is equivalent to rolling back data in the node).

As to **Claim 18**, *Chau* in combination with *Sulistio* teaches further comprising:

- read, from the XML element, a mode attribute, the mode attribute setting forth a modal or modeless type of error present in the node (*Chau*, page 19 [0525] wherein 'for each row mode db2sql' illustrates the mode attribute setting forth a modal); and
- if the type of error present in the node is the modal type, rolling back data in the node and displaying the error message on a display in which the node of the XML data file is represented (*Sulistio*, column 38, lines 28-29).

As to **Claim 19**, *Chau* in combination with *Sulistio* teaches further comprising:

- read, from the XML element, a mode attribute, the mode attribute setting forth a modal or modeless type of error present in the node (*Chau*, page 19 [0525] wherein 'for each row mode db2sql' illustrates the mode attribute setting forth a modal), and a second error message attribute, the second error message attribute including a second error message (*Chau*, page 17 [0459]); and
- if the type of error present in the node is the modal type, displaying the error message and the second error message on a display in which the node of the XML data file is represented (*Sulistio*, column 38, lines 28-29), or

- if the type of error present in the node is the modeless type, displaying the error message on the display (*Sulistio, column 38, lines 28-29*).

Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pub. No. US2004/0010752 issued to Chan et al. ("Chan") and further in view of US Patent No. 7,036,072 issued to Sulistio et al. ("Sulistio").

As to **Claim 20**, *Chan teaches* one or more computer-readable media comprising computer-executable instructions that perform the following when executed by a computer:

- read a first extensible markup language (XML) element containing a first attribute that indicates a match pattern (*page 1 [0008]*);
- parse the first attribute into an XPath expression (*page 2 [0013]*);
- find one or more nodes in an XML data file that match the match pattern by evaluating the nodes of the XML data file against the XPath expression (*page 3 [0033]*);
- *Chan does not explicitly teach* determine if one or more of the matching nodes violate a schema associated with the XML data file; read a second XML element associated with the first XML element, the second XML element containing an error message; and associate the error message with each of the matching nodes that violate the schema. However,

Sulistio teaches determine if one or more of the matching nodes violate a schema associated with the XML data file (*column 37, lines 26-34*); read a

second XML element associated with the first XML element, the second XML element containing an error message (*Figure 12, column 38, lines 35-45*); and associate the error message with each of the matching nodes that violate the schema (*column 38, lines 28-29*).

It would have been obvious to one of the ordinary skill in the art during the time the invention was made to use the error handling teaching of Sulistio with system and method for filtering xml documents with xpath expression teaching of Chan to provide method and system wherein error detected is displayed to facilitate error correction in computer programs.

As to **Claim 21**, *Chan in combination with Sulistio teaches* further comprising: display the error message for each of the matching nodes associated with the error message (*Sulistio, column 38, lines 28-29*).

Claims 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pub. No. US2004/0010752 issued to Chan et al. ("Chan") and further in view of Pub. No. US2004/0123277 issued to Schrader et al. ("Schrader").

As to **Claim 22**, *Chan teaches* one or more computer-readable media comprising computer-executable instructions that perform the following when executed by a computer:

- read an extensible markup language (XML) element containing a first attribute and a second attribute, wherein the first attribute indicates a match pattern (*page 1 [0008]*);
- parse the first attribute into an XPath expression (*page 2 [0013]*);
- parse the second attribute into a handler-object name (*page 2 [0013]*);
- find nodes in an XML data file that match the match pattern by evaluating the nodes of the XML data file against the XPath expression (*page 3 [0033]*);
- *Chan does not explicitly teach* create a handler object referencing executable code and having the handler-object name; associate the found nodes with the handler-object name; and execute, with aid from the handler-object name, the executable code referenced by the handler object when one of the found nodes is modified. However,
- *Schrader teaches* create a handler object referencing executable code and having the handler-object name (*page 3 [0037]*); associate the found nodes with the handler-object name (*page 4 [0048]*); and execute, with aid from the handler-object name, the executable code referenced by the handler object when one of the found nodes is modified (*Figure 6, page 5 [0053]*).

It would have been obvious to one of the ordinary skill in the art during the time the invention was made to use the tree parsing method of Schrader with system and method for filtering xml documents teaching of Chan to provide method and system to facilitate validation of xml data.

As to **Claim 23**, *Chan in combination with Schrader teaches* wherein the execution of the executable code accepts or rejects the modification to the found node (*Chan, Figure 5, line 18, page 6 [0082]*).

As to **Claim 24**, *Chan in combination with Schrader teaches* wherein the execution of the executable code indicates to a user whether or not the modification to the found node violates a validation rule (*Chan, Figure 5 wherein the validation is controlled by the boolean setting of the variable match*).

As to **Claim 25**, *Chan in combination with Schrader teaches* wherein the execution of the executable code modifies other nodes of the XML data file (*Schrader, page 1 [0008]*).

As to **Claim 26**, *Chan in combination with Schrader teaches* wherein the execution of the executable code modifies files associated with the XML data file (*Schrader, page 4 [0041]*).

As to **Claim 27**, *Chan in combination with Schrader teaches* wherein the modification includes the found node being deleted from the XML data file (*Schrader, page 4 [0051]*).

As to **Claim 28**, *Chan in combination with Schrader teaches* further comprising:

- evaluate a new node added to the XML data file against the XPath expression (*Chan, page 3 [0031, 0033]*);
- associate the new node with the handler-object name if the new node matches the match pattern (*Chan, Figure 6, line 16*); and

- execute, with aid from the handler-object name, the executable code referenced by the handler object (*Chan, Figure 5 wherein 'propagate-update()' represents the executable code referenced by the handler-object 'match-substring'*).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 29-30 are rejected under 35 U.S.C. 102(e) as being anticipated by

Pub. No. US 2003/0014397 issued to Chau et al. ("Chau").

As to **Claim 29**, *Chau teaches one or more computer-readable media comprising:*

- an extensible markup language (XML) element, the XML element having a match attribute (*page 29 [0744]*) and a handler-object attribute (*page 17 [0444-0446] wherein error checking object represents a handler-object attribute*), and wherein:

- the match attribute identifies nodes of an XML data file (*Figure 10, block1006, page 29 [0737] wherein the relational data element represents match attribute identifying node of xml data file*); and
- the handler-object attribute identifies executable code that is capable of being called to validate data in each of the identified nodes when data in each of the identified nodes is altered (*pages 20-21 [0564, 0566-0568]*).

As to **Claim 30**, *Chau teaches* wherein the match attribute includes an XPath expression identifying the nodes of the XML data file (*page 11 [0230-0231]*).

Claims 31-34 are essentially the same as Claims 1-4 except that the claims set forth the claimed invention as an apparatus rather than a method and therefore are rejected for the same reasons as applied to Claims 1-4.

Citation of Pertinent Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:
 - Breining et al. (Pub. No. US2003/0212664), "Querying Markup Language Data Sources Using A Relational Query Processor".
 - Leonid Pesenson (Pub. No. US2004/0044961), "Method and System For Transformation Of An Extensible Markup Language Document".


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Ha Dang whose telephone number is 571-272-4033. The examiner can normally be reached on Monday-Friday from 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thanh-Ha Dang
Examiner
Art Unit 2163


ALFORD KINDRED
PRIMARY EXAMINER